CSAP WORKPLACE MANAGED CARE PROJECT

THE UNIVERSITY OF VIRGINIA
STUDY METHOD - OVERVIEW

Substance Abuse and Substance Abuse Prevention in the Workplace

Acknowledgments

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ABSTRACT

The objectives of this three year, multi-site study, funded by the Substance Abuse and Mental Health Services Administration, are to describe, enhance, and evaluate a workplace managed care (WMC) program utilizing substance abuse prevention and early intervention efforts, assessing its strengths and weaknesses, impact on employees and their families, and the quality and delivery of services. At a large public university, these objectives are accomplished through three integrated components. The first component is a retrospective study combining existing data from the employer, the managed care organization (MCO), the Employee Assistance Program, and the Health Risk Appraisal (HRA) offered through the Health Enhancement Program. This data is used to determine differences in medical utilization (e.g., costs and types of services) and employment patterns (e.g., absenteeism and accidents) for groups of employees defined by use of preventive services and by risk status on the HRA. The research study can thus use highly sensitive and confidential information that is not typically available in a single integrated database to employers, service providers, or insurers. By working cooperatively with the research team, the employer and the MCO can have better information on service utilization patterns and cost effectiveness, while individual confidentiality is protected. The second component is a stratified random sample survey of employees. The survey provides data on the prevalence and patterns of substance use, attitudes towards substance use and associated risks, general and job-related stress and satisfaction, and use of preventive and early intervention services offered through WMC. The third component is a prospective study to provide a structured evaluation, through a staggered initiation strategy, of service enhancements to education, outreach, and follow-up. Data from the first year of the study provide documentation of the differing perspectives on the necessity and use of services, on acceptable levels of cost and risk to the employer, and on the prevalence of problem behaviors in the workplace population. This study provides the employer and the MCO, as well as the researchers and funders, an opportunity to convert existing data into useful information, to assess current needs in the workplace and to enhance to services in the context of a rigorous evaluation. Through studies such as these, employers and managed care organizations can be assisted in making sensible and defensible decisions on funding primary prevention services through the workplace.

INTRODUCTION

Substance abuse is costly -- whether the frame of reference is persons, economics or health care resources. In 1990, the total economic cost of alcohol abuse (including dependency) was estimated at $98.6 billion (1). Not only do alcohol-related problems and illnesses account for 15-40% of general hospital patients (2, 3), but the families of alcoholics consume a disproportionate share of health care services, compared to the families of non-alcoholics (4). Health care costs escalate further when the effects of alcohol and other drugs are considered jointly. Approximately 28% of all admissions to adult intensive care beds are due to substance-related illnesses, accounting for approximately 39% of adult intensive care bed costs; compared to patients with non-substance abuse-related illnesses, these patients average 1.4 days longer length of stay and the average cost of treatment is 63% higher (5).

According to statistics from the National Institute on Alcohol Abuse and Alcoholism, nearly 15% of workers report use of illicit drugs, a current problem with alcohol, or both; approximately 6% of the workforce experiences personal problems associated with alcohol and/or drug use (6). The negative personal and organizational effects of substance abuse in the workplace have been well documented. A survey of approximately 1,200 employees at five different workplaces found that smoking,

alcohol, and illicit drug use and prescription drug misuse resulted in reduced occupational performance and higher absenteeism (7).

In the public health model, prevention includes reduction of environmental and personal risk factors (primary prevention), early detection, diagnosis and treatment (secondary prevention), and amelioration of long-term consequences (tertiary prevention). Typically, workplace prevention through employee assistance programs have focused on tertiary prevention, with some resources directed to secondary prevention. But relatively few workplaces incorporate or emphasize primary prevention in the form of assessment of environmental risk factors, health appraisal and risk screening for employees, and proactive efforts to identify individuals with high potential for substance abuse. These activities are beyond the mandate of most employee assistance programs. Yet, many studies have identified that workplace characteristics, such as lack of a clear alcohol policy, inability to implement disciplinary action effectively, normative complacency about the need for intervention programs, and the quality of work life, are all related to the probability and level of employee use of substances (8). Prevention efforts should ideally include both *identification of* and *intervention with* environmental risk factors, personal risk factors, early problems and more severe or long-standing problems. Similarly, prevention strategies need to encompass a range of educational, policy, administrative, clinical, and supportive strategies.

The overall goal of this project at the University of Virginia is to work with existing resources to improve and evaluate services for the primary prevention of and early intervention with substance abuse problems in the workforce.

THE SETTING

The University of Virginia (UVA) is the largest employer in Central Virginia; 19% of the 72,800 nonagricultural wage and salary jobs in the Metropolitan Statistical Area are provided by UVA. The employee population consists of 9,341 faculty and staff and 4,382 wage employees. The employee profile conforms closely to the demographic profile of the Charlottesville/Albemarle County Area. UVA employees come from ten counties and one city. Overall, approximately 60% of the UVA workforce is female; 16.5% is non-white, with the majority of the non-white population being African-American. Approximately 5% have Spanish as a first language; less than 1% of the classified employees at UVA are Asian-American or Native American.

RESEARCH OBJECTIVES

The funding mechanism for this cooperative agreement specifies a single primary goal and two outcome objectives. Each site designed an individual study strategy to meet the goal through the outcome objectives. The primary goal is to "determine which public/private sector workplace managed care (WMC) substance abuse prevention and early intervention programs are the most effective in reducing the incidence and prevalence of substance abuse and to disseminate these findings." The first outcome objective is to "determine the nature [e.g., structure, organization, function, etc.] of WMC programs utilizing substance abuse prevention and early intervention efforts." The second objective is to "provide a detailed description of the WMC programs; assess their strengths and weaknesses and their impact on the substance abuse of employees and their families (e.g., covered lives); and assess the quality and delivery of substance abuse prevention and early intervention."

The UVA project has three components. First, the *survey component* is a stratified random survey of 2,000 faculty and staff. The content of the survey is determined in collaboration with the Steering Committee and the cross-site evaluation team for the WMC Cooperative Agreement. Second, the *retrospective study component* is a comparison of managed care and employer information for groups of UVA employees as defined by use of risk status on a Health Risk Appraisal (HRA) and use of existing intervention services. Third, the *prospective study component* is an interrupted time series and non-equivalent group comparison of managed care and employer information for the faculty and staff in the Health Sciences Center (where five enhancements to services will be implemented) compared to the faculty and staff in the remainder of the University (which will not have the enhancements). The service enhancements are a web site for information on primary prevention and early intervention; a drug testing policy; intensive and extensive manager and supervisor training associated with implementation of the drug testing policy; enhancements to the marketing of the HRA; and enhancements to communication between the employee wellness program and Primary Care Physicians (PCPs).

THE SURVEY COMPONENT

All full-time employees, both faculty and staff, at the UVA Charlottesville site are eligible to participate in the stratified random sample survey of 2,000 employees. Participants are randomly chosen within strata of sex and employment center (Health Sciences Center versus all others). Participation is entirely voluntary, confidential, and anonymous. In order to protect confidentiality, the UVA Center for Survey Research handles all survey logistics, including selection of the sample, mailing, receiving and recording the results. The research team does not have access to the names of anyone in the sample. This allows the team to offer a generous incentive for completion of the survey (drawings of 40 prizes of $100 each) without compromising anonymity.

The letter accompanying the survey guarantees that no one will be contacted by telephone, that neither the research team nor other UVA personnel, including supervisors, will be able to determine which responses came from which employees and that no individual will ever be identified in any way through survey responses. The protocol includes an initial mailing of the questionnaire

with stamped, self-addressed return envelope, two reminder postcards, a second mailing of the questionnaire with return envelope, and a final reminder postcard.

The survey contains four sections. Section 1 establishes the respondents' knowledge about policies and services related to substance abuse prevention at UVA, and respondents' use of and satisfaction with relevant services. Section 1 also contains general questions on satisfaction with the workplace and with relationships within the workplace. Section 2 focuses on a general assessment of well-being, and specific assessments of role stresses and satisfactions in four possible roles: employee, spouse, parent, and caregiver to elderly relative. Section 3 focuses on use of alcohol and other drugs, with the emphasis on use of alcohol. Several questions quantify typical consumption, including a question on frequency of binge drinking (although that term is never used in the questionnaire). Binge drinking is defined as five or more drinks on the same occasion for men and four or more drinks on the same occasion for women. This section also contains questions asking respondents to assess the amount of risk associated with various patterns of use of alcohol and other drugs and to indicate the acceptability of various patterns of use. Respondents are asked to identify any problems in the workplace which have occurred as a result of substance use.

Section 4 of the survey questionnaire focuses on descriptive and demographic information.

THE RETROSPECTIVE COMPONENT

In 1990, the UVA Health Services Foundation began a university-wide workplace health promotion and disease prevention program, the Institute for Quality Health (IQ Health), as a fringe benefit free of charge to individuals and departments funded through the university employees' benefits pool. The Health Enhancement Program (HEP), the Faculty/Employee Assistance Program (FEAP), and Occupational Health Services (OHS) are the primary operating units of IQ Health. A fundamental strength of IQ Health is its health risk appraisal (HRA) that was developed in 1993. The HRA incorporates data relevant to early risk identification, including substance abuse problems, and primary care. Risk analysis equations, cut points, and client messages are modifiable to reflect the changing knowledge base. The University's Human Resources Policy was modified to include provision for release time from work for all employees to participate in the HRA screening and follow-up sessions.

The FEAP deals directly with employee substance abuse issues. Specific services include training and education of managers and supervisors regarding the signs and symptoms of substance abuse; employee education about UVA's policy as it relates to their drug-free workplace program and the university's standards of

conduct; assessment and referral; determination of the level of intensity of care and coordination of services; and case management, including management of re-entry into the workplace.

The retrospective study is designed to maximize the information available through IQ Health and to investigate variations in medical utilization (e.g., costs and types of services) and employment patterns (e.g., absenteeism and accidents) associated with use of the existing spectrum of preventive services at UVA and with risk status on the Health Risk Appraisal (HRA). The study combines existing data, from January 1996 through December 1998, from the employer, the managed care organization, the Employee Assistance Program, and the HRA offered through the Health Enhancement Program. This component of the research study can thus use highly sensitive and confidential information which is not typically available in a single integrated database to employers, service providers, or insurers. By working cooperatively with the research team, the employer and the managed care organization can have better information on utilization patterns and cost effectiveness, while confidentiality is protected.

THE PROSPECTIVE COMPONENT

The prospective study provides a structured evaluation, through a staggered implementation strategy, of service enhancements to education, outreach and follow-up. Figure 2 presents the logic model for the prospective study. Each enhancement to services (including marketing of the web site) will be implemented in the Health Sciences Center six months to one year prior to implementation in the remainder of the University. Each site will serve as its own control, with information collected in the survey and the retrospective components providing baseline measures on the variables of interest. In addition, the staggered implementation will allow for comparison between the sites.

Figure 2: Prevention Intervention Logic Model

What behaviors are we preventing?	How are we preventing these behaviors?	What workplace related outcomes or behaviors do we expect to affect?	How will we measure these outcomes or behaviors?
<Drug use on the job <Problematic drug use <Inappropriate use of medical services <Inappropriate responses by managers/supervisors <Non-participation in HRA <Lack of follow-up for risks identified on HRA <Lack of awareness of policy and resources	<Web site <Drug-testing policy <Manager/supervisor training <Intensive marketing of HRA <Outreach to PCPs	<Increased knowledge of IQ Health services <Increased use of FEAP <Increased participation in HRA <Decreased prevalence of drinking on the job <Decreased absenteeism <Decreased turnover <Decreased health care costs associated with substance abuse problems	<IQ Health databases <Health claims records <Human Resources database database <Annual manager/ supervisor interviews <Annual stratified random sample survey <Focus groups <Web tracking software <HRA exit interviews <Telephone interviews

The UVA study includes evaluation of both outcome objectives and impact objectives. The outcome objectives, congruent with the outcome objectives of cross-site project, focus on decrease in medical utilization costs and negative outcomes for the employer (absenteeism, accidents, turn-over). Outcome objectives will not be assessed for each component of intervention individually, but will be assessed for the project site as a whole, using the combined database from Human Resources, IQ Health, and the managed care provider. Statistical analyses will follow generally the protocol for the cross-site analyses with an emphasis on multivariate determinations of time trends for the dependent variables of medical utilization and negative outcomes for the employer. The impact objectives focus on the penetration throughout the target population (UVA employees and their dependents) of each enhancement to primary prevention and early intervention services. The evaluation of the impact objectives includes both measurement of specific indicators of success as well as qualitative assessments of employees' opinions and attitudes.

The web site (**http:\www.hsf.iqhealthvirginia.com**) incorporates information on all resources available through UVA for employee wellness, primary prevention and early intervention, as well as links to national health and wellness information sites, including sites within the Substance Abuse and Mental Health Services Administration web site. The web site is updated quarterly to reflect current activities, including the schedule for the Health Risk Appraisal sessions and risk reduction courses. The monthly update also provides a "tip of the month" related to substance abuse prevention. The site, which has unrestricted access, includes several interactive components, providing employees and their families with an opportunity to complete and receive the results immediately of a simple stress test and a brief substance abuse risk questionnaire. The creation of the web site is accompanied by a marketing campaign to inform employees of the site. The marketing campaign includes a variety of strategies for reaching the target audience (all covered lives through UVA's managed health care plan) through the workplace, the managed care company, hospitals, emergent/walk-in clinics, offices of primary care physicians and other health care providers, and public service announcements. The impact of the web site is evaluated through the

number of hits per month, and questions on knowledge and use of the web site on both the manager/supervisor interviews and the employee survey.

UVA will implement a pre-employment and for-cause drug testing policy for all employees in safety-sensitive positions. The FEAP and Human Resources will provide intensive and extensive manager and supervisor training to assist managers and supervisors in understanding the rationale and logistics of drug-testing, their responsibilities under the policy, resources available to them and the scope of the problem of substance abuse in the workplace. The research team is cooperating in the design of the training and will conduct an evaluation of the impact and effectiveness of the training. The evaluation has two components: a pre- and post-test, administered at the time of the training, focusing on knowledge and attitudes, and an annual personal interview with managers and supervisors focusing on knowledge, attitudes and experiences.

Enhancements to the marketing of the HRA and enhancements to communication between the employee wellness program and Primary Care

Physicians (PCPs) are two aspects of a single enhancement plan. Employees who participate in the HRA have the option of requesting that the results be forwarded to their PCPs. At the current time, employee participation in the HRA averages approximately 15% per year and less than 1/3 of those participating opt to have the results sent to their PCPs. This project has the goal of increasing employee participation to at least 25% and increasing to 45% those who chose to share the results with their PCPs. Individual PCPs and the managed care company providing coverage for all UVA employees are cooperating with this project. From April 1999 through September 1999, all employees of the Health Sciences Center who are targeted for an HRA screening will receive a personal letter, at their home address, from the managed care company, encouraging participation while expressly stating the complete confidentiality of the information.

From October 1999 through September 2000, employees of the Health Sciences Center who are targeted for an HRA screening will receive a personal letter, at their home address, from their PCP, encouraging participation and encouraging participants to give permission to share the

information with the PCP. Letters from the managed care company to targeted employees who do not work in the Health Sciences Centers will begin in October 1999 and continue through March 2000. From April 2000 through September 2000, non-Health Sciences Center employees will also receive a letter from their PCPs. The impact of this enhancement will be evaluated through participation rates in the HRA, the percentage of employees who are willing to share the information with their PCPs, and exit interviews with randomly chosen participants. A secondary evaluation will be the percentage of participants who are identified as at risk for substance abuse problems, as increased participation by at risk individuals is a desired impact for this enhancement. Brief telephone interviews with small random samples of targeted employees, selected from those who participated and those who chose not to participate, will provide information on barriers to participation and on perceptions of the letters of encouragement from the managed care company and the PCP.

IMPLICATIONS

The UVA study is designed to provide the employer and the managed care organization, as well as the researchers and funders, with an opportunity to convert existing data into useful information, to assess current needs in the workplace and to implement enhancements to services in the context of a rigorous evaluation. Studies such as these can assist employers and managed care organizations in making sensible and defensible decisions on funding primary prevention services through the workplace.

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